Remarks

The following remarks are provided in further support of the Claims.

Claim Objections

Claim 19 is objected to because the second "is" should be corrected to "in".

Claim 13 is objected to because "polythiolphene" is incorrectly spelled and should be correct to "polythiphene".

Applicants thank the Examiner for noting these spelling errors and have amended said claims to correct those errors.

Rejections

Rejection Under 35 U.S.C. §103

Claims 1-2, 5-6, and 8-12 are rejected under 35 USC 103(a) as being unpatentable over Brinker et al. (US Patent No. 6,264,741, hereafter '741).

Claims 3-4, 7 and 18 are rejected under 35 USC 103(a) as being unpatentable over Brinker et al. ('741), further in view of Petruska (US Patent No. 7,226,953, hereafter '953).

Claims 14-16 are rejected under 35 USC 103(a) as being unpatentable over Brinker et al. ('741), in view of Brinker et al. (US Patent No. 6,397,453, hereafter '453).

Claim 17 is rejected under 35 USC 103(a) as being unpatentable over Brinker et al. ('741) and Brinker et al. ('453), further in view of Benzing et al (US Patent No. 6,528,153, hereafter '153).

Claim 13 is rejected under 35 USC 103(a) as being unpatentable over Brinker et al. ('741), further in view of Treadway et al. (US Patent No. 6,815,064, hereafter '064).

Claims 19 and 20 are rejected under 35 USC 103(a) as being unpatentable over Brinker et al. ('741), further in view of Fitzgerald et al. (US Patent No. 6,232,090, hereafter '090).

Claim 21 is rejected under 35 USC 103(a) as being unpatentable over Kan et al. (US Patent No. 6,646,302, hereafter '302) in view of Brinker ('453), further in view of Petruska ('9530 and Brinker ('741).

I. DISCUSSION (Rejection Under 35 USC 103, Brinker '741)

Brinker '741 describes a method of making a nanocomposite self-assembled material comprising mixing at least one hydrophilic compound, at least one hydrophobic compound, and at least one amphiphilic surfactant in a solvent consisting essentially of a polar organic compound and water and then evaporating a portion of the solvent, forming a nanocomposite material that is either layered or tubular (see Brinker '741, Column 2, lines 25-40). Brinker '741 discloses a hydrophobic material that is an organic monomer or an alkoxide (see Colum 4, lines 22-25 and lines 34-40). In particular, the hydrophobic compound of Brinker '741, which is the core or interior material of the micelles formed, is ""polymerizable and includes organic monomers, such as methacrylates, functionalized styrene monomers, and 1,6-hexanediol dimethyacryate, and alkoxide compounds, including alkaline alkoxides, magnesium arylalkoxides, titanium alkoxides, zirconium alkoxides, alkaline earth alkoxides, and fluorinated metal alkoxides."

In contrast to Brinker '741, the method of the present invention, as specified by Claims 1-2, 5-6 and 8-12, excludes the presence of hydrophylic compounds and specifically only uses hydrophobic compounds. The added new claim 23 also has this limitation as the phrase "consisting essentially of" is utilized rather than the open-ended term "comprising". Additionally, the method of the present invention excludes the addition of any polar organic compound in the solvent containing the surfactant. The new claim 22 also specifically excludes organic compounds from being utilized as the hydrophobic compound of the present invention, in direct contrast to Brinker '741 which utilizes only organic compounds as the hydrophobic material.

Therefore, Applicants submit that Brinker '741 neither suggests nor teaches the method of making a nanocrystalline micellar solution with a hydrophobic material and a surfactant in water without the presence of a hydrophilic material as recited in claims 1-2, 5-6 and 8-12.

II. DISCUSSION (Rejection Under 35 USC 103, Brinker '741 in view of Petruska '953)

Petruska '953 teaches a solution where a hydrophobic precursor could be a semiconductor such as CdSe. However, Brinker '741 specifically only includes organic compounds in using hydrophobic compounds to produce the lamellar and tubular nanocrystalline compounds described in Brinker '741. The use of the more spherical CdSe compound would not provide a suitable hydrophobic compound to give the materials developed by Brinker '741.

However, even so, Brinker '741 in view of Petruska '953 do not describe, suggest or teach the method of making a nanocrystalline micellar solution with a hydrophobic material and a surfactant in water without the presence of a hydrophilic material, as recited in claims 3, 4, 7 and 18.

III. DISCUSSION (Rejection Under 35 USC 103, Brinker '741 in view of Brinker '453)

Claims 14 -16 are dependent upon claim 9. Section I discusses claim 9, concluding that Brinker '741 does not teach nor suggest the method of claim 9. Brinker '741 in view of Brinker '453, do not teach the method of making a nanocrystalline micellar solution with a hydrophobic material and a surfactant in water without the presence of a hydrophilic material, as recited in claim 9 and the dependent claims 14-16.

IV. DISCUSSION (Rejection Under 35 USC 103, Brinker '741 in view of Brinker '453 and further in view of Benzing et al. '153)

Claim 17 is dependent upon claim 9. Section I discusses claim 9, concluding that Brinker '741 does not teach nor suggest the method of claim 9. Brinker '741 in view of Brinker '453 and Benzing '153 therefore, do not teach the method of making a nanocrystalline micellar solution with a hydrophobic material and a surfactant in water without the presence of a hydrophilic material, as recited in claim 9 and the dependent claim 17.

V. DISCUSSION (Rejection Under 35 USC 103, Brinker '741 in view of Treadway '064)

Claim 13 is dependent upon claim 9. Section I discusses claim 9, concluding that Brinker '741 does not teach nor suggest the method of claim 9. Brinker '741 in view of Treadway '064, do not teach the method of making a nanocrystalline micellar solution with a hydrophobic material and a surfactant in water without the presence of a hydrophilic material, as recited in claim 9 and the dependent claim 13.

VI. DISCUSSION (Rejection Under 35 USC 103, Brinker '741 in view of Fitzgerald '090)

Claims 19-20 are dependent upon claim 1. Section I discusses claim 1, concluding that Brinker '741 does not teach nor suggest the method of claim 1. Brinker '741 in view of Fitzgerald '090 do not teach the method of making a nanocrystalline micellar solution with a hydrophobic material and a surfactant in water without the presence of a hydrophilic material, as recited in claim 1 and the dependent claims 19-20.

VII. DISCUSSION (Rejection Under 35 USC 103, Kan '303 in view of Brinker '453 further in view of Petruska '953 and Brinker '741)

The Office notes that '302 teached P-type Si substrate with back side contacts but does not teach forming the golf nanocrystals layer by first making a solution. Sections I-III discuss why '741, '453 and '953 do not teach the method of making a nanocrystalline micellar solution with a hydrophobic material and a surfactant in water without the presence of a hydrophilic material, as recited in claim 21.

CONCLUSION

Applicants have responded to each and every rejection raised by the Office and, in concurrence with the Office, consider that claims 1-23 are now in condition for allowance. Applicants request expeditious processing to issuance. The Office is authorized to charge any additional fees, including fees for additionally submitted claims, to Charge Account No. 19-0131.

Respectfully submitted,

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